Water Supply Outlook For Idaho

SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

IDAHO SOIL CONSERVATION DISTRICTS
IDAHO DEPARTMENT OF WATER RESOURCES

AS OF
JUNE 1, 1981

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Mast of the usable water in western states ariginates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates af snowmelt runaff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more af the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefare subject ta a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mauntain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same lacation near the same dates each year.

Snow surveys are made manthly or semi-manthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will pravide a continuous record of snow water and ather parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: Snow surveyors making special measurements of the snowpack near Mt. St. Helens Volcano, Washington, April 1980.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.

WATER SUPPLY OUTLOOK FOR IDAHO

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

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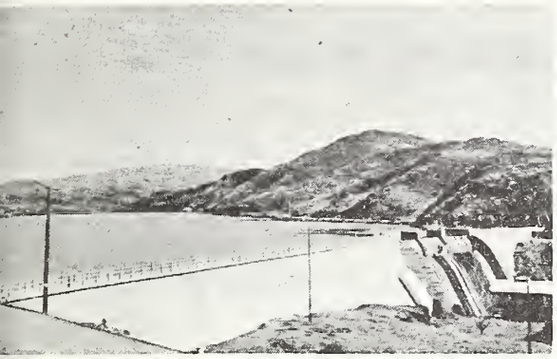
WATER SUPPLY OUTLOOK for IDAHO



GENERAL SUMMARY FOR JUNE 1, 1981

The water supply for Idaho is forecast as good for those areas having reservoir facilities. All major reservoirs except those south of the Snake River are full or have a surcharge. Streamflow during the summer and fall is expected to drop sharply and be below normal due to the deficient snow pack and accelerated spring melt. Water users obtaining supplies direct from streamflow, especially on small streams, can expect shortages to occur during the latter part of the season.

Snow course measurements near June 1, indicate a well below normal snowpack for this time of year. This is a continuation of the deficient conditions experienced during the entire winter. In general, well above average rainfall, even at high elevations, accelerated the snow melt and resulted in above normal runoff during the month of May.

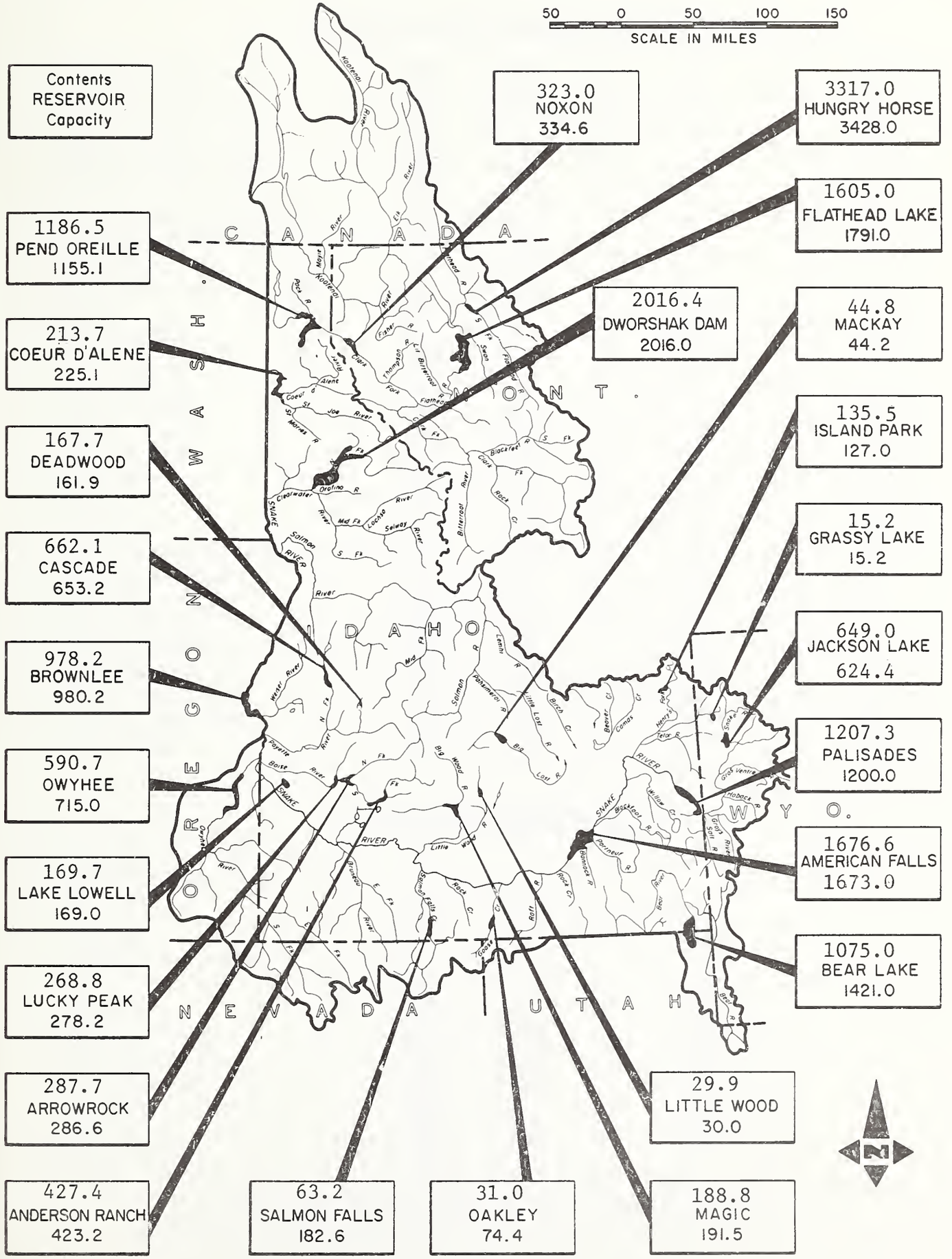
Valley precipitation during May, as reported by the U.S. Weather Service, continued a wet spring after a dryer than normal winter. Storms during the last half of the month pushed most stations' precipitation above normal for the month. Twin Falls reported a low of 67 percent of average while Ashton received 304 percent of normal. Temperatures across Idaho averaged just below normal for May.

Due to below normal runoff expected during 1981, water users should manage their supplies as efficiently as possible to provide carryover water in the reservoirs for 1982. A below normal snowpack during the winter of 1981-82 would result in severe shortages next year unless reserves are provided for in the reservoirs.

RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

JUNE 1, 1981



SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
					Water Content (inches)	
NAME	Elevation	Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average [b]

JUNE 1, 1981 MEASUREMENTS

Atlanta Summit		7600	5/29	14	6.8	21.4	20.5*
Big Creek Summit		6580	5/28	23	10.5	22.8	18.6
Breezy Saddle		5010	5/29	0	0.0	--	--
Brundage Mountain		7560	6/1	38	18.2	31.8	36.9*
Coolwater Mountain		6040	5/29	13	5.2	--	16.4*
Crater Meadows		5960	5/29	15	8.0	--	32.0*
Crawford Ranger Station		4860	5/28	0	0.0	0.0	--
Deadwood Summit		6860	5/29	28	14.8	--	--
Elk Butte		5550	5/29	0	0.0	--	10.7*
Freds Mountain	Wyo.	8150	5/29	13	4.8	T	--
Galena		7440	5/28	0	0.0	0.0	2.6*
Galena Summit		8780	5/28	23	10.3	13.0	13.9*
Goat Lake		6500	5/29	42	17.1	--	36.8*
Graham Ranch		6270	5/28	0	0.0	0.0	--
Granite Peak		6000	5/29	25	9.4	--	31.5*
Hemlock Butte		5810	5/29	8	3.3	--	30.9*
Jackson Peak		7070	5/29	9	4.4	--	11.9*
Lake Fork		5290	5/28	0	0.0	0.0	--
Lookout		5140	5/29	0	0.0	0.0	15.0*
Lost Lake		6110	5/29	38	16.2	--	46.4*
Moores Creek Summit		6100	5/29	0	0.0	12.6	12.5
Pine Creek Pass		6810	5/29	0	0.0	0.0	--
Schweitzer Ridge		6200	5/29	26	13.2	5.4	--
Secesh Summit		6520	5/28	0	0.0	11.2	--
Shanghai Summit		4570	5/29	0	0.0	--	--
Squaw Meadow		5900	5/28	0	0.0	10.4	15.3*
State Line		6660	5/29	0	0.0	0.0	--
Trinity Mountain		7770	5/29	19	9.5	29.7	25.7*
Vienna Mine		8960	5/29	38	17.5	30.7	29.4*

SUPPLEMENTAL MEASUREMENTS

DECEMBER 15, 1980

Island Park	6290	12/16	19	4.3	--	--

JANUARY 15, 1981

Bad Bear	4940	1/19	12	3.7	10.0	--
Bogus Basin	6340	1/19	16	4.7	--	--
Bogus Basin Road	5540	1/19	0	0.0	--	--
Crooked Fork	3610	1/14	6	2.0	--	--
Fish Lake Airstrip	5650	1/15	23	8.2	--	--
Galena	7440	1/14	27	8.2	--	--
Galena Summit	8780	1/14	29	8.8	--	--

*(b) 1963–77, 15 year period. # Not located directly on this drainage. * Estimated 1963–77 15 year average. (A) Aerial observation. Water content estimated. (SP) Pressure Pillow snow-water equivalent. (R) Radioactive Gage snow-water equivalent.*

SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR: Date of Survey	THIS YEAR: Snow Depth (Inches)	THIS YEAR: Water Content (Inches)	PAST RECORD: Water Content (inches) Last Year	PAST RECORD: Water Content (inches) Average [b]

SUPPLEMENTAL MEASUREMENTS (Continued)

Hemlock Butte	5810	1/15	24	7.7	--	--
Lolo Pass	5240	1/14	20	6.4	--	--
Moores Creek Summit	6100	1/19	28	9.6	20.7	--
Savage Pass	6170	1/14	27	8.9	--	--
Shanghai Summit	4570	1/15	0	0.0	--	--
FEBRUARY 15, 1981						
Atlanta Summit	7600	2/13	44	13.6	25.7	--
Atlanta Townsite	5280	2/13	18	5.3	--	--
Bad Bear	4940	2/17	19	5.8	12.3	--
Bogus Basin	6340	2/17	29	7.5	--	--
Bogus Basin Road	5540	2/17	0	0.0	--	--
Crooked Fork	3610	2/17	13	4.8	7.2	--
Fish Lake Airstrip	5650	2/13	50	11.6	22.8	--
Galena	7440	2/12	39	11.1	--	--
Galena Summit	8780	2/12	44	12.4	--	--
Graham Guard Station	5690	2/13	26	8.2	12.5	--
Hemlock Butte	5810	2/13	55	14.4	25.6	--
Jackson Peak	7070	2/13	46	14.7	24.8	--
Lolo Pass	5240	2/17	44	10.8	21.0	--
Moores Creek Summit	6100	2/17	47	14.3	24.5	--
Shanghai Summit	4570	2/13	26	4.1	12.4	--
Trinity Mountain	7770	2/13	51	16.1	31.6	--
Vienna Mine	8960	2/13	53	15.5	29.7	--
MARCH 15, 1981						
Above Burke	4100	3/16	20	8.4	12.8	--
Atlanta Summit	7600	3/13	51	17.6	35.2	--
Atlanta Townsite	5280	3/18	11	4.2	--	--
Bad Bear	4940	3/16	13	4.3	12.6	--
Banner Summit	7040	3/16	55	18.8	--	--
Bogus Basin	6340	3/13	28	10.0	--	--
Bogus Basin Road	5540	3/13	0	0.0	--	--
Crooked Fork	3610	3/16	0	0.0	8.5	--
Elk Butte	5550	3/18	39	11.7	24.5	--
Fish Lake Airstrip	5650	3/17	61	17.1	30.9	--
Galena	7440	3/14	37	11.9	18.3	--
Galena Summit	8780	3/14	49	16.8	21.4	--
Graham Guard Station	5690	3/13	21	8.4	15.3	--
Hemlock Butte	5810	3/17	64	18.1	33.4	--
Jackson Peak	7070	3/13	52	18.2	34.2	--
Lolo Pass	5240	3/16	37	12.8	24.5	--
Lookout Pass	5140	3/16	46	17.2	24.8	--
Lost Lake	6110	3/18	84	27.2	37.5	--

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SNOW

DRAINAGE BASIN and/or SNOW COURSE NAME	Elevation	THIS YEAR: Date of Survey	THIS YEAR: Snow Depth (Inches)	THIS YEAR: Water Content (Inches)	PAST RECORD: Water Content (inches) Last Year	PAST RECORD: Water Content (inches) Average [b]	

SUPPLEMENTAL MEASUREMENTS (Continued)

Moores Creek Summit	6100	3/16	47	15.1	31.3	--
Prairie	4800	3/15	0	0.0	1.5	--
Savage Pass	6170	3/16	47	15.6	24.8	--
Shanghai Summit	4570	3/17	18	4.2	15.3	--
Sherwin	3200	3/16	0	0.0	6.5	--
Trinity Mountain	7770	3/13	56	21.3	43.7	--
Vienna Mine	8960	3/13	60	21.8	39.1	--
APRIL 15, 1981						
Atlanta Summit	7600	4/14	64	21.8	41.1	--
Bad Bear	4940	4/15	0	0.0	12.7	--
Bogus Basin	6340	4/15	42	15.7	--	--
Bogus Basin Road	5540	4/15	0	0.0	--	--
Crooked Fork	3610	4/14	0	0.0	--	--
Elk Butte	5550	4/15	60	18.2	--	--
Fish Lake Airstrip	5650	4/15	77	23.7	--	--
Galena	7440	4/14	38	15.3	20.1	--
Galena Summit	8780	4/14	59	19.7	27.0	--
Graham Guard Station	5690	4/14	17	6.5	16.5	--
Hemlock Butte	5810	4/15	87	27.4	--	--
Jackson Peak	7070	4/14	67	23.1	34.8	--
Lolo Pass	5240	4/14	53	17.9	--	--
Lookout Pass	5140	4/15	65	21.2	29.2	--
Lost Lake	6110	4/15	117	37.5	--	--
Moores Creek Summit	6100	4/15	57	20.2	37.6	--
Pierce Ranger Station	3080	4/15	0	0.0	--	--
Prairie	4800	4/15	0	0.0	0.0	--
Savage Pass	6170	4/14	68	21.3	--	--
Shanghai Summit	4570	4/15	26	8.3	--	--
Trinity Mountain	7770	4/14	74	27.7	50.2	--
Vienna Mine	8960	4/14	75	27.4	39.0	--
MAY 15, 1981						
Bogus Basin	6340	5/17	0	0.0	--	--
Bogus Basin Road	5540	5/17	0	0.0	--	--
Crater Meadows	5960	5/18	42	19.5	--	--
Elk Butte	5550	5/18	0	0.0	--	--
Galena	7440	5/12	0	0.0	--	--
Galena Summit	8780	5/12	38	13.4	16.3	--
Hemlock Butte	5810	5/18	41	16.3	--	--
Lookout Pass	5140	5/13	20	8.6	2.4	--
Lost Lake	6110	5/18	67	26.5	--	--
Moores Creek Summit	6100	5/19	6	2.6	22.3	--
Shanghai Summit	4570	5/18	0	0.0	--	--
Trinity Mountain	7770	5/19	39	18.3	36.9	--

*(b)1963-77, 15 year period. #Not located directly on this drainage. * Estimated 1963-77 15 year average. (A) Aerial observation. Water content estimated. (SP) Pressure Pillow snow-water equivalent. (R) Radioactive Gage snow-water equivalent.*

GOVERNMENT AGENCIES

States:

Idaho Department of Water Resources
State of Idaho Department of Fish and Game
University of Idaho
Idaho State University
Montana Agricultural Experiment Station
Montana State Water Conservation Board
Montana Cooperative Snow Surveys
Nevada Cooperative Snow Surveys
Oregon Agricultural Experiment Station
Oregon Cooperative Snow Surveys
Oregon State Engineer and Corps of
State Watermasters
Utah Cooperative Snow Surveys
Wyoming Cooperative Snow Surveys

Federal:

U. S. Army Engineers

U. S. Department of Agriculture
Forest Service
ESCS Crop Reporting Service
SEA Agricultural Research

U. S. Department of Commerce
NOAA, National Weather Service

U. S. Department of the Interior
Bonneville Power Administration
Water and Power Resources Service
Fish and Wildlife Service
Water Resources Division, Geological Survey
National Park Service
Bureau of Land Management

PUBLIC UTILITIES

Washington Water Power Company
Idaho Power Company

ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District
Blaine Soil Conservation District
Boise Project Board of Control
Idaho Water District #01
Little Wood River Irrigation District
Mann Creek Irrigation District
Salmon Falls Creek Irrigation Company
Twin Falls Soil Conservation District
Big Wood Irrigation Company
Owyhee Project - North & South Board of Control
Valley Soil Conservation District
Portneuf Soil and Water Conservation District
East Cassia Soil and Water Conservation District
West Cassia Soil and Water Conservation District
Camas Soil and Water Conservation District

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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